



Correlates of Mental Health Conditions and Prolonged Grief Disorder among Widows from Selected Churches in Nairobi County, Kenya

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Abstract

Background: Prolonged grief disorder (PGD) is a chronic mental health condition that causes functional impairment in which about 45% - 50% of bereaved individuals adapt to the loss quickly, whereas the rest of this population prolong the symptoms of grief for more than a year after the loss of a loved one. PGD often co-exists with other mental disorders such as PTSD, depression, anxiety and many more. **Objective:** This study sought to investigate the correlates of depression, PTSD, and complicated grief among widows from selected churches in Nairobi County, Kenya. **Methods:** A total of 253 widows with age ranges from 30 to 80 years with a mean age of $45.3 \pm$ (SD: 10.698) were recruited into the study. The tools for data collection were a researcher-generated social demographic questionnaire, Inventory of Complicated Grief (ICG), Beck Depression Inventory (BDI-II), and Harvard Trauma Questionnaire Revised (HTQ-5). **Results:** The results of Pearson correlation test indicated that there was a strong positive correlation between PGD and depressive disorder at 2-tailed significant level ($r = 0.825$, $p = 0.001$), between PGD and PTSD ($r = 0.760$; $p = 0.001$), between the participants' years of marriage and PGD ($r = 0.724$; $p = 0.001$), between depressive disorder and PTSD ($r = 0.619$; $p = 0.001$). However, this study showed a negative correlation between the period of widowhood and depressive illness ($r = -0.011$; $p = 0.05$). **Conclusion:** This study concludes that while screening widows for PGD, clinicians may assess other comorbidities of PGD such as depression and PTSD early enough.

Subject Areas

Psychology, Sociology

Keywords

Prolonged Grief Disorder (PGD), Correlates, Mental Health Conditions, Depression, PTSD, Complicated Grief, Widows

1. Introduction

Grief is a normal response to bereavement, and it occurs differently in terms of severity and duration [1]. Meanwhile, when a bereaved individual is unable to function and the levels of distress sequel to the loss of a beloved one becomes extreme and prolonged persistently, prolonged grief disorder may be considered [1]. Prolonged grief disorder is a chronic mental health condition that causes functional impairment longer than expected. According to Shear (2015) [2], this condition is a form of grief that is characterized by intense feelings of yearning, and longing for the deceased, which interferes with the healing process of the individual. Prolonged grief disorder (PGD) also known as complicated grief or traumatic grief (TG) [3], is a mental disorder, which is presented with a variety of symptoms such as depression, emotional pains, loneliness, emotional numbness, and difficulty in managing interpersonal relationships [4].

Szuhany *et al.* (2021) [1], argued that grief symptoms prolonged beyond the common trajectory among approximately 26% to 45% of bereaved individuals. However, other studies showed a higher prevalence of complicated grief. For example, McDevitt-Murphy *et al.* (2012) [5] reported the prevalence of complicated grief among African victims of homicide in USA at 54.5%. Similarly, a prevalence study among women whose children died in South Africa found that half of the participants (50%) had complicated grief. [6] Also, results from a systematic review among the bereaved individuals following unnatural losses such as murder, terror, or natural disasters showed a prevalence of 49%. [7] On the other hand, a few studies found a lower prevalence of complicated grief disorder. For instance, a comparative study on the prevalence of complicated grief among Togolese and French found 15.4% and 21.9% prevalence respectively. [8] Another lower prevalence was found among bereaved adults with non-traumatic loss due to old age or sickness at 10%. [9]

Empirical studies have shown that symptoms of PGD are comorbid with several other mental health conditions. Komischke-Konnerup, Zachariae, Johannsen, Nielsen, & O'Connor (2021) [10], in a systematic review and meta-analysis, found that PGD co-occurred with depression, anxiety, and PTSD. Komischke-Konnerup *et al.* in the same study argued that higher estimates of co-occurrence of other mental health conditions correlate with longer mean time since loss. Another study found that PGD significantly increased the likelihood of anxiety, depression, somatization, PTSD, loneliness, and substance use disorder. [11] A positive correlation between complicated grief and major depressive disorder was found in a psychiatric outpatient group. [12] [13] Additionally, Carmassi *et*

al. (2015) [14] in a study among individuals with complicated grief found a significant correlation with major depression disorders. The research provides a suggestion that a relationship between a lifetime mood symptom and adult separation anxiety symptoms in patients both with major depression and complicated grief.

Furthermore, bereaved individuals who have experienced homicidal loss, disaster-related death, vicious demise in situations such as a calamity, suicide, or abrupt and unforeseen death will need to deal with parting grief that is in relation to what they have lost as well as traumatizing grief which is associated with conditions related to the cause of death. The above responses relate to posttraumatic stress disorder (PTSD) and complicated grief. A study by Nakajima *et al.* (2012) [15] about complex grieving by people who lost someone through a vicious death found that complicated grief is comorbid with PTSD. A similar study on the prevalence and correlates of complex grief and PTSD from a sample of homicidally bereaved persons in a community-based reported a negative correlation between PTSD and complicated grief. [15] Results of a study by Schnider, Elhai, and Gray (2007) [16] on correlates of complex grief symptom severity, as well as PTSD among the bereaved persons who are reporting a painful loss, demonstrated how an avoidant emotional coping style and a significance in positive correlation with problem-focused in both PTSD and complicated grief.

Additionally, other mental health conditions have been linked to comorbidity of complicated grief. For instance, Fisher *et al.* (2020) [17] in a study, found anxiety to be significantly correlated with complicated grief and recommended that individuals with complicated grief should be screened for anxiety. Similarly, another study found that there was an association between psychiatric comorbidity and considerably greater severity of grief. The same study found that severity of complicated symptoms was associated with social impairment and greater work. [18] Also, another study indicates that complicated grief greatly intensified the threat of suicidality following the control for significant cofounders such as PTSD and major depression disorder. This implied that complicated grief insinuates an autonomous psychiatric threat for behaviours and suicidal thoughts. [19] On this note, this study sought to investigate the correlates of prolonged grief disorder and mental health conditions among 253 widows from selected churches in Kenya. The participants' age ranged from 30 to 80 years and the selected participants must have lost their husbands over a period of at least 6 months.

2. Methods

This section outlines the core quantitative research methods employed in this study.

2.1. Design and Procedures

This study is an extract from a non-equivalent quasi-experimental design, which

is PhD dissertation intervention research. This article, being one of the objectives is a cross-sectional study to investigate the correlates of prolonged grief disorder and mental health conditions among widows from selected churches in Kenya. This study purposively selected widows from a few churches in Nairobi County namely, All Saints Cathedral church, PCEA St. Andrews Church, Christ is the Answer Ministry (CITAM), Valley Road and Nairobi Baptist Church, who have lost their husbands in the last six months and have not been able to cope with grief. The total of 253 widows were recruited into the study using the formula by Casagrande, Pike, and Smith (1978). [20] In calculating the sample size, the study considered the significance level of 0.05, the confidence level of 95%, and the power at the lowest 80% as an improved estimated formula for calculating sample sizes for the binary distribution, which is the standardized statistical power for social science research. [21]

2.2. Research Instruments

The tools for data collection were a researcher-generated social demographic questionnaire, Inventory of Complicated Grief (ICG), Beck Depression Inventory (BDI-II), and Harvard Trauma Questionnaire Revised (HTQ-5). The ICG was used to assess complicated grief, BDI-II was used to assess the severity of depressive illness while HTQ-5 was used to assess the posttraumatic stress disorder respectively.

The social demographic questionnaire was generated by the researcher to assess the categorical variables such as age, education level, and involvement in religious church activities, levels of spirituality, family economic status, employment status, support systems and friendship with others. Also, the Inventory of Complicated Grief (ICG) developed by Prigerson *et al.* (1995) [22], was used to assess the pathological grief such as anger, disbelief, and hallucination as exhibited by the grieving individuals. The tool was structured in a way that it contrasts with the TRIG which assesses more normal grief symptoms. The instrument consists of 19 first-person statements concerning the immediate bereavement-related thoughts and behaviours of the client. The ICG has 5 response options, ranging from “Never” to “Always.” The internal consistency of ICG was shown to be good (Prigerson *et al.*, 1995b) [22]. The alpha coefficient was 0.94, the test-retest reliability was found in the same study to be 0.80. Clients who score over 25 are considered to present with high severity of complicated grief and will require clinical care. The scale has been noted to have a well-validated clinical cutpoint.

The second standardized instrument used in this study was Beck Depressive Inventory (BDI-II), which was developed by Aaron T. Beck in 1966. [23] BDI-II is a 21-item self-reporting rating inventory that measures the intensity, severity, and depth of depression in patients with psychiatric diagnoses. BDI-II was a significant psychometric instrument displaying high reliability and capacity to discriminate between depressed and non-depressed subjects. [24] External con-

sistency, reliability and concurrent validity of BDI-II had been established a cross a wide variety of samples. BDI-II reliability for outpatient sample was a coefficient alpha of 0.92 ($n = 500$), as stated in the manual. BDI-II has been certified against the Diagnostic and Statistical Manual of Mental Disorders (DSM-5).

The third instrument used to collect data in this study is the Harvard Trauma Questionnaire Revised (HTQ-5). This instrument is a questionnaire that is administered by a clinician and adapted and intended to be used across cultures. The instrument was validated by scholars for various cultural and linguistic groups. [25] Further, the HTQ-5 was modified to be consistent with current DSM-5 diagnostic criteria to identify those at risk for mental health and other symptoms associated with traumatic life events, disability, and dysfunction. The instrument was designed to discriminate the diagnosis of PTSD using DSM-5. [26] The psychometric properties of HTQ-5 show evidence of good reliability and validity among 48 samples. The inter-rater reliability was found at $k = 0.98$, test-retest reliability ($r = .92$) and internal consistency (Cronbach $\alpha = 0.96$). [27]

2.3. Participants' Recruitment

The total of 253 widows participated in the study. The participants' age ranges from 30 to 80 years, with the mean age $45.3 \pm$ (SD: 10.698). The screened participants at baseline phase of the study were sampled across some selected churches in Nairobi. The eligible participants must be an adult aged 30 years to 80 years and must have lost their husbands over a period of at least 6 months. **Table 1** below shows the distribution of sociodemographic characteristics and scores on ICG, BDI-II, and HTQ-5.

Table 1 displays the distribution of sociodemographic characteristics and participant's scores on inventory of complicated grief, Beck depression inventory and Harvard trauma questionnaire. As shown on the Table, in terms of the participant's age and the outcome variables, the frequency of complicated grief was higher among the participants aged 61 - 70 years at 60.5%, depressive illness was noted to be higher among the participants aged 61 - 70 years at 60.5% and likewise, the proportion of PTSD was higher among the same age group at 62.9%. Therefore, complicated grief and co-existing mental health conditions such as depressive disorder and PTSD are higher among the aged widows compared to younger ones. This implies that aged widows are more vulnerable to mental conditions in bereavement.

Regarding participant's years of marriage, data shows that the proportion of complicated grief was higher among the participants who had married between 21 - 30 years at 53.8%, depressive disorder was also higher among the same category of the participants who had married between 21 - 30 years at 60%, and PTSD was higher among the same category at 64.5%. This shows that widows who have married for more than 20 years are more likely to develop mental health conditions together with complicated grief compared to those who have married in less than 20 years. Concerning the period of widowhood, the frequency

Table 1. Distribution of sociodemographic characteristics and scores on complicated grief, depression, and PTSD.

| Variables | Total % | ICG | | BDI | | HTQ-r | |
|--------------------------------------|------------|------------|-----------|------------|-----------|------------|-----------|
| | | ≤25 | ≥26 | ≤13 | ≥14 | ≤2.50 | ≥2.51 |
| Participant's age | | | | | | | |
| 30 - 40 years | 116 (45.8) | 110 (67.9) | 6 (6.6) | 111 (60.7) | 5 (7.1) | 113 (59.2) | 3 (4.8) |
| 41 - 50 years | 74 (29.2) | 51 (31.5) | 23 (25.3) | 59 (32.2) | 15 (21.4) | 61 (31.9) | 13 (21.0) |
| 51 - 60 years | 14 (5.5) | 1 (0.6) | 13 (14.3) | 7 (3.8) | 7 (10.0) | 7 (3.7) | 7 (11.3) |
| 61 - 70 years | 46 (18.2) | 0 (0.0) | 46 (60.5) | 4 (2.2) | 42 (60.0) | 7 (3.7) | 39 (62.9) |
| 71 - 80 years | 3 (1.2) | 0 (0.0) | 3 (3.3) | 2 (1.1) | 1 (1.4) | 3 (1.6) | 0 (0.0) |
| Participant's years of marriage | | | | | | | |
| ≤5 years | 41 (16.2) | 36 (22.2) | 5 (5.5) | 38 (20.8) | 3 (4.3) | 39 (20.4) | 2 (3.2) |
| 6 - 10 years | 108 (42.7) | 104 (64.2) | 4 (4.4) | 105 (57.4) | 3 (4.3) | 106 (55.5) | 2 (3.2) |
| 11 - 20 years | 53 (20.9) | 22 (13.6) | 31 (34.1) | 32 (17.5) | 21 (30.0) | 35 (18.3) | 18 (29.0) |
| 21 - 30 years | 49 (19.4) | 0 (0.0) | 49 (53.8) | 7 (3.8) | 42 (60.0) | 9 (4.7) | 40 (64.5) |
| 31 - 50 years | 2 (0.8) | 0 (0.0) | 2 (2.2) | 1 (0.5) | 1 (1.4) | 2 (1.0) | 0 (0.0) |
| Participant's period of widowhood | | | | | | | |
| ≤10 years | 245 (96.8) | 161 (99.4) | 84 (92.3) | 177 (96.7) | 68 (97.1) | 187 (97.9) | 58 (93.5) |
| ≥11 years | 8 (3.2) | 1 (0.6) | 7 (7.7) | 6 (3.3) | 2 (2.9) | 4 (2.1) | 4 (6.5) |
| Participant's level of education | | | | | | | |
| KCE/KCSE | 1 (0.4) | 0 (0.0) | 1 (1.1) | 0 (0.0) | 1 (1.4) | 0 (0.0) | 1 (1.6) |
| Certificate | 47 (18.6) | 32 (19.8) | 15 (16.5) | 34 (18.6) | 13 (18.6) | 36 (18.8) | 11 (17.7) |
| Diploma | 98 (38.7) | 47 (29.0) | 51 (56.0) | 62 (33.9) | 35 (51.4) | 67 (35.1) | 31 (50.0) |
| Bachelor | 76 (30.0) | 55 (34.0) | 21 (23.1) | 58 (31.7) | 18 (25.7) | 58 (30.4) | 18 (29.0) |
| PGD | 30 (11.9) | 28 (17.3) | 2 (2.2) | 29 (15.8) | 1 (1.4) | 29 (15.2) | 1 (1.6) |
| Master's | 1 (0.4) | 0 (0.0) | 1 (1.1) | 0 (0.0) | 1 (1.4) | 1 (0.5) | 0 (0.0) |
| Participant's family economic status | | | | | | | |
| Poor | 103 (40.7) | 91 (56.2) | 12 (13.2) | 91 (49.7) | 12 (17.1) | 92 (48.2) | 11 (17.7) |
| Moderate | 145 (57.3) | 70 (43.2) | 75 (82.4) | 91 (49.7) | 54 (77.1) | 98 (51.3) | 47 (75.8) |
| Affluent | 5 (2.0) | 1 (0.6) | 4 (4.4) | 1 (0.5) | 4 (5.7) | 1 (0.5) | 4 (6.5) |
| Participant's employment status | | | | | | | |
| Self-employed | 107 (42.3) | 87 (53.7) | 20 (22.0) | 90 (49.2) | 17 (24.3) | 89 (46.6) | 18 (29.0) |
| Employed | 108 (42.7) | 72 (44.4) | 36 (39.6) | 82 (44.8) | 26 (37.1) | 86 (45.0) | 22 (35.5) |
| No job yet | 13 (5.1) | 3 (1.9) | 10 (11.0) | 7 (3.8) | 6 (8.6) | 8 (4.2) | 5 (8.1) |
| Retired | 25 (9.9) | 0 (0.0) | 25 (27.5) | 4 (2.2) | 21 (30.0) | 8 (4.2) | 17 (27.4) |

of complicated grief was significantly higher among the participants who had lost their spouses in 10 years or less at 92.3%, depressive disorder was also higher among them at 97.1% and the proportion of PTSD was observed to be higher at 93.5% compared to another category. This also implies that complicated grief and other comorbidities are common among those who have grieved in less than 10 years. That shows that the more the years of widowhood the less the likelihood of complicated grief.

With reference to the education levels of the participants, data shows that the frequency of complicated grief was higher among the participants whose education level was diploma at 56%, and depressive disorder was similarly higher among the same category at 51.4%. Likewise, frequency of PTSD was higher among the same category of participants at 50% compared to other categories in this study. Furthermore, in terms of participant's family economic status. The high proportion of complicated grief was observed among the participants who perceived their family economic status to be moderate at 82.4%, depressive disorders as well at 77.1%, and PTSD at 75.8% among the same categories. This means that complicated grief and other comorbidities are higher among the widows with low economic status as opposed to those who considered their finances stable. In addition, regarding to participant's employment status, the frequency of complicated grief was higher among the participants who were employed at 39.6% as opposed to other categories of employment status. Depressive disorder was also higher among the employed at 37.1% as well as the frequency of PTSD among the employed participants at 35.5% compared to other categories of employment status.

2.4. Ethical Considerations

The study made several ethical considerations. The researcher obtained institutional approval from Daystar University Research and Ethics Review Board through the Head of Department (HoD) of psychology and counselling. Also, ethics clearance was obtained from the Daystar University Ethics Review Board (DUERB). Thereafter, permission from the National Commission for Science, Technology, and Innovation (NACOSTI) was obtained before the commencement of data collection. Written informed consent was collected from each respondent to participate in the study. Awareness was created for the participants that their participation would be voluntary and that they could withdraw from the study at any time without penalty. The identities of participants remained anonymous throughout the research work to protect their confidentiality.

3. Results

This study sought to investigate whether mental health conditions such as depressive illness and posttraumatic stress disorder have linear correlation with complicated grief.

Table 2 shows a comparison of the inventory of complicated grief scores with

participants' scores on Beck depression inventory, and Harvard trauma questionnaire at baseline. As indicated on the Table, the prevalence of complicated grief was higher at 36% as opposed to the frequency of depressive disorder at 27.7% and posttraumatic stress disorder (PTSD) at 24.5%. This shows that the proportion of major depressive disorder and PTSD was smaller compared to the proportion of complicated grief.

Table 3 displays the Fisher's exact test, which is a statistical significance test used in the analysis of contingency tables. It compares the proportions of a categorical outcome in accordance with different independent groups. As shown in the Table, 88.5% of the participants who were considered to present with normal level of depressive symptoms similarly scored low in inventory of complicated grief, meaning they have uncomplicated grief. Likewise, all the participants whose scores were depressive disorder (100%), also scored high on ICG. Exact test indicates a significant coefficient between the scores on ICG and depression ($p < 0.001$). This means that the lower the ICG scores, the lower the scores on depression, and the higher the scores on ICG, the higher the scores on depression. That suggests that widows with complicated grief are more likely to exhibit depression symptoms.

Additionally, with reference to PTSD, data shows that a significant proportion (84.8%) of the participants with normal levels of trauma also scored low in ICG,

Table 2. Comparison of complicated grief scores with depression and PTSD.

| Inventory of complicated grief (ICG) | | Beck depression inventory (BDI-II) | | Harvard trauma questionnaire (HTQ-r) | |
|--------------------------------------|-------------|------------------------------------|------------|--------------------------------------|------------|
| uncomplicated | Complicated | Normal | MDD | Normal | PTSD |
| 162 (64%) | 91 (36%) | 183 (72.3%) | 70 (27.7%) | 191 (75.5%) | 62 (24.5%) |

Table 3. Fisher's exact test showing participant's scores on complicated grief and mental health conditions.

| Variable | Total | Beck depression inventory (BDI-II) | | Fisher's Exact Test | |
|--------------------------------------|--------------|--|-------------|---------------------|--------|
| | | Normal | MDD | Value | Sig. |
| Inventory of complicated grief (ICG) | | | | | |
| Uncomplicated | 162 (64.0%) | 162 (88.5%) | 0 (0.0%) | 172.282 | <0.001 |
| Complicated | 91 (36.0%) | 21 (11.5%) | 70 (100%) | | |
| Total | 253 (100.0%) | 183 (100.0%) | 70 (100.0%) | | |
| Variable | Total | Harvard trauma questionnaire (revised) | | Fisher's Exact Test | |
| | | Normal | PTSD | Value | Sig. |
| Inventory of complicated grief (ICG) | | | | | |
| Uncomplicated | 162 (64.0%) | 162 (84.8%) | 0 (0.0%) | 146.202 | <0.001 |
| Complicated | 91 (36.0%) | 29 (15.2%) | 62 (100.0%) | | |
| Total | 253 (100.0%) | 191 (100.0%) | 62 (100.0%) | | |

whereas, all the participants (100%) who scored high on HTQ, which was interpreted to present with PTSD, also scored high on ICG, meaning that they had complicated grief. The Fisher's Exact test indicates a significant coefficient ($p < 0.001$). This implies that the higher the scores on complicated grief, the higher the scores on trauma. In addition, the lower the scores on ICG, the lower the scores on trauma.

Figure 1 displays the relationship between complicated grief and mental health conditions. As shown, the higher the scores on the inventory of complicated grief, the higher the scores on depressive disorders and PTSD.

Table 4 exhibits the results of Pearson correlation test to evaluate the correlates of complicated grief, mental conditions, and key sociodemographic factors such as years of marriage, and period of widowhood. The result of the test shows a strong positive correlation between complicated grief and depressive disorder at 2-tailed significant level ($r = 0.825$, $p = 0.01$). Positive correlation in this study

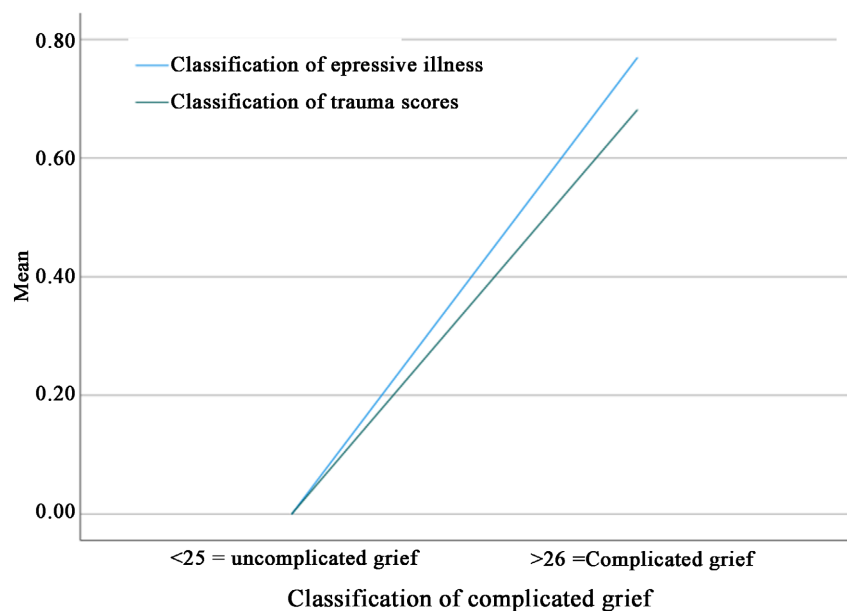


Figure 1. Comparison of complicated grief and mental health conditions.

Table 4. Pearson Correlation test indicates correlates of complicated grief, mental conditions, years of marriage, and periods of widowhood.

| | ICG | BDI-II | HTQ-r | Years of marriage | Period of widowhood |
|---------------------|---------|---------|---------|-------------------|---------------------|
| ICG | - | | | | |
| BDI-II | 0.825** | - | | | |
| HTQ-r | 0.760** | 0.777** | - | | |
| Years of marriage | 0.724** | 0.642** | 0.619** | - | |
| Period of widowhood | 0.194** | -0.011* | 0.107 | 0.098 | - |

**Correlation is significant at the 0.01 level (2-tailed). *Correlation is significant at the 0.05 level (1-tailed).

implies that as the severity of complicated grief increases, level of depressive disorder similarly increases. That means that the two-variable move in the same direction. Similarly, the result of the Pearson correlation indicates a strong positive correlation between complicated grief and PTSD ($r = 0.760$; $p = 0.01$). The implication of this result shows that the two-variable move in the same direction. Meaning that as scores on ICG increases, scores HTQ also increases. This is interpreted that the higher the severity of complicated grief, the higher the levels of PTSD. That means that complicated grief and PTSD go together. The intensity of complicated grief comes together with experiencing symptoms of PTSD.

Furthermore, the Pearson correlation test indicates a strong positive correlation between the participants' years of marriage and complicated grief ($r = 0.724$; $p = 0.01$), depressive disorder ($r = 0.724$; $p = 0.01$), and PTSD ($r = 0.619$; $p = 0.01$). These findings indicate that as the years of marriage increase, the severity of complicated grief, depression and PTSD also increase, because they move in the same direction. Moreover, regarding the period of widowhood, the result of the Pearson correlation shows a strong positive correlation between period of widowhood and complicated grief ($r = 0.194$; $p = 0.01$). This also means that as the period increases, the severity of complicated grief similarly increases. Conversely, a negative correlation was found between the period of widowhood and depressive illness ($r = -0.011$; $p = 0.05$). Negative correlation implies that the two variables move in opposite directions. This suggests that as the period of widowhood increases, level of depression decreases. Meanwhile, there was no correlation between period of widowhood and PTSD.

4. Discussion

Objective of this present study was to investigate the correlates of complicated grief, depressive illness, and posttraumatic stress disorder. The results of Pearson correlation test in this study indicated that there was a strong positive correlation between complicated grief and depressive disorder at 2-tailed significant level ($r = 0.825$, $p = 0.01$). The finding of strong positive correlation between CG and depressive disorder in this study implied that the two variables move in the same direction. That is, as symptoms of complicated grief increase, the symptoms of depressive disorder similarly increase. This finding is consistent with empirical literature. For example, the results from a study among older adults in Peru showed that complicated grief was positively associated with depression and even suicidal ideation. [28] Further, findings from a systematic review and meta-analysis of co-occurrence disorders with complicated grief revealed that estimates of prolonged grief disorder co-occurred with major depressive disorder, anxiety, and PTSD. [29] Several other studies have shown that complicated grief correlates with symptoms of depression, anxiety, and PTSD, however, factor-analytic studies have consistently demonstrated that complicated grief is distinct from other co-existing disorders. [10] [12] [14] [31]

Additionally, this current study found a strong positive correlation between

complicated grief and PTSD ($r = 0.760$; $p = 0.01$). Symptoms of PTSD and complicated grief can be caused by a traumatic and stressful loss. Although, symptoms of PTSD may not be noticed immediately after the loss, but over the period of three months, both symptoms of grief and PTSD can co-occur simultaneously. [30] The findings from this present study show a strong positive correlation between complications and PTSD, which implies that the two variables move in the same direction. This conclusion is consistent with other empirical studies, in which this current study similarly affirms. For example, Glad, Stensland, Czajkowski, Boelen, & Dyb (2021), [32] in a study at Norway similarly found a strong positive correlation between PTSD and complicated grief. Glad *et al.* [32] in the same study concluded that targeting PTSD symptoms among trauma-exposed bereaved may hinder later development of complicated grief. Furthermore, Nakajima *et al.* (2012), [15] [33] examined correlates of complex grief and PTSD, and the result from the study indicated that complicated grief comorbid with PTSD. Also, van Denderen, de Keijser, Huisman, and Boelen (2016), [16] in a community-based study among homicidally bereaved individuals found a positive correlation of PTSD and complicated grief. Moreover, Fisher *et al.* (2020), [18] in a study, found anxiety, PTSD, and depression to be significantly correlated with complicated grief and recommended that individuals with complicated grief should be screened for anxiety, PTSD, and depression.

Furthermore, the Pearson correlation test in this present study showed a strong positive correlation between the participants' years of marriage and complicated grief ($r = 0.724$; $p = 0.01$), depressive disorder ($r = 0.724$; $p = 0.01$), and PTSD ($r = 0.619$; $p = 0.01$). The implication of these findings shows that, couples become more attached to each other as the years of marriage increase. When one of them dies, the intensity of grieving becomes more severe, which can result into complicated grief. Positive correlation between the years of marriage, depression, and PTSD implies that the higher the established attachment with the deceased, the higher the symptoms of depression, complicated grief, and PTSD. These results affirm Bowlby's theory of attachment. According to Bowlby, high levels of attachment anxiety may predict 'chronic mourning' which is characterized by overwhelming anxiety and sadness, prolonged difficulty in re-engaging with adaptive functioning and forming new relationships, preoccupation with the deceased, and difficulty accepting the loss. Anxiously attached individuals tend to experience chronic activation of the attachment system, leading to hyper-accessibility of thoughts of the deceased loved one which may perpetuate excessive yearning. [34]

Similarly, the period of widowhood, is positively correlated with complicated grief ($r = 0.194$; $p = 0.01$), and PTSD, but negatively correlated with depression ($r = -0.011$; $p = 0.05$). This means that depression symptoms seem to reduce as period of widowhood increases. These findings are consistently similar to empirical literature, which affirms that period of widowhood is associated with a high prevalence of depression. The same study found that the prevalence of depression continues to be high at least 5 years into widowhood but declines sig-

nificantly as the years increases beyond 5 years. [35] This is also like the findings of a systematic review and meta-analysis, where it was found that the prevalence of depression decreases with increasing time of widowhood. [36]

5. Conclusion

This study sought to investigate the correlates of mental health conditions and prolonged grief disorder among widows from selected churches in Nairobi County, Kenya. Data was collected from 253 widows aged 30 to 80 years that were purposively selected from a few churches in Nairobi County namely, All Saints Cathedral church, PCEA St. Andrews Church, Christ is the Answer Ministry (CITAM), Valley Road and Nairobi Baptist Church, Kenya. The recruited participants in this study must have lost their husbands in the last six months and have not been able to cope with grief. Findings from this present study showed the general prevalence of prolonged grief disorder at 36%, major depressive disorder at 27.7% and PTSD at 24.5%. The study found evidence of a strong positive correlation between PGD and depression and PTSD. Also, it proved that the increase of years in marriage is a determinant to developing PGD. Moreso, the study established that as the period of widowhood increases, the severity of depression decreases. It is therefore concluded that while screening widows for PGD, clinicians may consider assessing other comorbidities of PGD such as major depression and PTSD early enough to plan for holistic treatment appropriately.

Conflicts of Interest

The authors declare no conflicts of interest.

References

- [1] Szuhany, K.L., Malgaroli, M., Miron, C.D. and Simon, N.M. (2021) Prolonged Grief Disorder: Course, Diagnosis, Assessment, and Treatment. *Focus*, **19**, 161-172. <https://doi.org/10.1176/appi.focus.20200052>
- [2] Shear, M.K. (2015) Complicated Grief. *New England Journal of Medicine*, **372**, 153-160. <https://doi.org/10.1056/nejmcp1315618>
- [3] Zordan, R.D., Bell, M.L., Price, M., Remedios, C., Lobb, E., Hall, C., *et al.* (2019) Long-Term Prevalence and Predictors of Prolonged Grief Disorder amongst Bereaved Cancer Caregivers: A Cohort Study. *Palliative and Supportive Care*, **17**, 507-514. <https://doi.org/10.1017/s1478951518001013>
- [4] Treml, J., Kaiser, J., Plexnies, A. and Kersting, A. (2020) Assessing Prolonged Grief Disorder: A Systematic Review of Assessment Instruments. *Journal of Affective Disorder*, **274**, 420-434. <https://doi.org/10.1016/j.jad.2020.05.049>
- [5] McDevitt-Murphy, M.E., Neimeyer, R.A., Burke, L.A., Williams, J.L. and Lawson, K. (2012) The Toll of Traumatic Loss in African Americans Bereaved by Homicide. *Psychological Trauma: Theory, Research, Practice, and Policy*, **4**, 303-311. <https://doi.org/10.1037/a0024911>
- [6] Goldstein, R.D., Lederman, R.I., Lichtenthal, W.G., Morris, S.E., Human, M., Elliott, A.J., *et al.* (2018) The Grief of Mothers after the Sudden Unexpected Death of Their Infants. *Pediatrics*, **141**, e20173651. <https://doi.org/10.1542/peds.2017-3651>

- [7] Djelantik, A.A., Smid, D.E., Mroz, A., Kleber, R.J. and Boelen, P.A. (2020) The Prevalence of Prolonged Grief Disorder in Bereaved Individuals Following Unnatural Losses: Systematic Review and Meta Regression Analysis. *Journal of Affective Disorder*, **265**, 146-156. <https://doi.org/10.1016/j.jad.2020.01.034>
- [8] Kokou-Kpolou, C.K., Cenat, J.M., Noorishad, P.G., Park, S. and Bacqué, M.-F. (2020) A Comparison of Prevalence and Risk Factor Profiles of Prolonged Grief Disorder among French and Togolese Bereaved Adults. *Social Psychiatry and Psychiatric Epidemiology*, **55**, 757-764. <https://doi.org/10.1007/s00127-020-01840-w>
- [9] Lundorf, M., Holmgren, H., Zachariae, R., Farver-Vestergaard, I. and O'Connor, M. (2017) Prevalence of Prolonged Grief Disorder in Adult Bereavement: A Systematic Review and Meta-Analysis. *Journal of Affective Disorders*, **212**, 138-149. <https://doi.org/10.1016/j.jad.2017.01.030>
- [10] Komischke-Konnerup, K.B., Zachariae, R., Johannsen, M., Nielsen, L.D. and O'Connor, M. (2021) Co-Occurrence of Prolonged Grief Symptoms and Symptoms of Depression, Anxiety, and Posttraumatic Stress in Bereaved Adults: A Systematic Review and Meta-Analysis. *Journal of Affective Disorders Reports*, **4**, Article 100140. <https://doi.org/10.1016/j.jadr.2021.100140>
- [11] Peinadol, V., Valientel, C., Contreras, A., Trucharte, A., Butter, S., Murphy, J. and Shevlin, M. (2024) ICD-11: Prolonged Grief Disorder: Prevalence, Predictors, and Co-Occurrence in a Large Representative Sample. *International Journal of Psychology*, **59**, 86-95. <https://doi.org/10.1002/ijop.12951>
- [12] Robbins-Welty, G., Stahl, S., Zhang, J., Anderson, S., Schenker, Y., Shear, M.K. and Reynolds, C.F. (2018) Medical Comorbidity in Complicated Grief: Results from the HEAL Collaborative Trial. *Journal of Psychiatric Research*, **96**, 94-99. <https://doi.org/10.1016/j.jpsychires.2017.09.017>
- [13] Sung, S.C., Dryman, M.T., Marks, E., Shear, M.K., Ghesquiere, A., Fava, M., et al. (2011) Complicated Grief among Individuals with Major Depression: Prevalence, Comorbidity, and Associated Features. *Journal of Affective Disorders*, **134**, 453-458. <https://doi.org/10.1016/j.jad.2011.05.017>
- [14] Carmassi, C., Gesi, C., Corsi, M., Pergentini, I., Cremone, I.M., Conversano, C., et al. (2015) Adult Separation Anxiety Differentiates Patients with Complicated Grief and/or Major Depression and Is Related to Lifetime Mood Spectrum Symptoms. *Comprehensive Psychiatry*, **58**, 45-49. <https://doi.org/10.1016/j.comppsy.2014.11.012>
- [15] Nakajima, S., Ito, M., Shirai, A. and Konishi, T. (2012) Complicated Grief in Those Bereaved by Violent Death: The Effects of Posttraumatic Stress Disorder on Complicated Grief. *Dialogues in Clinical Neuroscience*, **14**, 210-214. <https://doi.org/10.31887/DCNS.2012.14.2/snakajima>
- [16] Van Denderen, M., de Keijser, J., Huisman, M. and Boelen, P.A. (2016) Prevalence and Correlates of Self-Rated Posttraumatic Stress Disorder and Complicated Grief in a Community-Based Sample of Homicidally Bereaved Individuals. *Journal of Interpersonal Violence*, **31**, 207-227. <https://doi.org/10.1177/0886260514555368>
- [17] Schnider, K.R., Elhai, J.D. and Gray, M.J. (2007) Coping Style Use Predicts Posttraumatic Stress and Complicated Grief Symptom Severity among College Students Reporting a Traumatic Loss. *Journal of Counseling Psychology*, **54**, 344-350. <https://doi.org/10.1037/0022-0167.54.3.344>
- [18] Fisher, J.E., Zhou, J., Liu, A.G., Fullerton, C.S., Ursano, R.J. and Cozza, S.J. (2020) Effect of Comorbid Anxiety and Depression in Complicated Grief on Perceived Cognitive Failures. *Depression and Anxiety*, **37**, 54-62.

- <https://doi.org/10.1002/da.22943>
- [19] Simon, N.M., Shear, K.M., Thompson, E.H., Zalta, A.K., Perlman, C., Reynolds, C. F. and Silowash, R. (2017) The Prevalence and Correlates of Psychiatric Comorbidity in Individuals with Complicated Grief. *Comprehensive Psychiatry*, **48**, 395-399. <https://doi.org/10.1016/j.comppsy.2007.05.002>
- [20] Latham, A.E. and Prigerson, H.G. (2014) Suicidality and Bereavement: Complicated Grief as Psychiatric Disorder Presenting Greatest Risk for Suicidality. *Suicide & Life-Threatening Behavior*, **34**, 350-362. <https://doi.org/10.1521/suli.34.4.350.53737>
- [21] Casagrande, J.T., Pike, M.C. and Smith, P.G. (1978) An Improved Approximate Formula for Calculating Sample Sizes for Comparing Two Binomial Distributions. *Biometrics*, **34**, 483-486. <https://doi.org/10.2307/2530613>
- [22] Rahman, M.S. (2017) The Advantages and Disadvantages of Using Qualitative and Quantitative Approaches and Methods in Language “Testing and Assessment” Research: A Literature Review. *Journal of Educational and Learning*, **6**, 102-108. <https://doi.org/10.5539/jel.v6n1p102>
- [23] Prigerson, H.G., Frank, E., Kasl, S., Reynolds, C., Anderson, B., Zubenko, G.S., Kupfer, D.J., et al. (1995) Complicated Grief and Bereavement Related Depression as Distinct Disorders: Preliminary Empirical Validation in Elderly Bereaved Spouses. *American Journal of Psychiatry*, **152**, 22-30. <https://doi.org/10.1176/ajp.152.1.22>
- [24] Beck, A.T., Steer, R.A. and Carbin, M.G. (1988) Psychometric Properties of the Beck Depression Inventory: Twenty-Five Years of Evaluation. *Clinical Psychology Review*, **8**, 77-100. [https://doi.org/10.1016/0272-7358\(88\)90050-5](https://doi.org/10.1016/0272-7358(88)90050-5)
- [25] Wang, Y. and Gorenstein, C. (2013) Psychometric Properties of the Beck Depression Inventory-II: A Comprehensive Review. *Revista Brasileira de Psiquiatria*, **35**, 416-431. <https://doi.org/10.1590/1516-4446-2012-1048>
- [26] Shoeb, M., Weinstein, H. and Mollica, R. (2007) The Harvard Trauma Questionnaire: Adapting a Cross-Cultural Instrument for Measuring Torture, Trauma and Posttraumatic Stress Disorder in Iraqi Refugees. *International Journal of Social Psychiatry*, **53**, 447-463. <https://doi.org/10.1177/0020764007078362>
- [27] Kleijn, W.C., Hovens, J.E. and Rodenburg, J.J. (2001) Posttraumatic Stress Symptoms in Refugees: Assessments with the Harvard Trauma Questionnaire and the Hopkins Symptom Checklist—25 in Different Languages. *Psychological Reports*, **88**, 527-532. <https://doi.org/10.2466/pr0.2001.88.2.527>
- [28] Rasmussen, A., Verkuilen, J., Ho, E. and Fan, Y. (2015) Posttraumatic Stress Disorder among Refugees: Measurement Invariance of Harvard Trauma Questionnaire Scores across Global Regions and Response Patterns. *Psychological Assessment*, **27**, 1160-1170. <https://doi.org/10.1037/pas0000115>
- [29] Escobar-Agreda, S., Romero Albino, Z., Contreras, P.J. and Cuba-Fuentes, M.S. (2023) Complicated Grief and Its Relationship with Anxiety, Depression, and Suicidal Ideation in Older Adults in the Context of the COVID-19 Pandemic in Peru: A Cross-Sectional Analysis. *BMC Psychiatry*, **23**, Article No. 908. <https://doi.org/10.1186/s12888-023-05412-5>
- [30] Boelen, P.A., Eisma, M.C., Geert, E.S. and Lenferink, L.I. (2020) Prolonged Grief Disorder in Section II of DSM-5: A Commentary. *European Journal of Psychotraumatology*, **11**, 132-148. <https://doi.org/10.1080/20008198.2020.1771008>
- [31] Prigerson, H.G., Kakarala, S., Gang, J. and Maciejewski, P.K. (2021) History and Status of Prolonged Grief Disorder as a Psychiatric Diagnosis. *Annual Review of Clinical Psychology*, **17**, 12-32. <https://doi.org/10.1146/annurev-clinpsy-081219-093600>

- [32] Glad, K.A., Stensland, S., Czajkowski, N.O., Boelen, P.A. and Dyb, G. (2021) The Longitudinal Association between Symptoms of Posttraumatic Stress and Complicated Grief: A Random Intercepts Cross-Lag Analysis. *Psychological Trauma: Theory, Research, Practice, and Policy*, **14**, 386-392.
<https://doi.org/10.1037/tra0001087>
- [33] Wen, F., Prigerson, H.G., Chou, W., Huang, C., Hu, T., Chiang, M.C., *et al.* (2022) How Symptoms of Prolonged Grief Disorder, Posttraumatic Stress Disorder, and Depression Relate to Each Other for Grieving ICU Families during the First Two Years of Bereavement. *Critical Care*, **26**, Article No. 336.
<https://doi.org/10.1186/s13054-022-04216-5>
- [34] Bowlby, J. (1980) *Attachment and Loss: Loss, Sadness, and Depression*. Basic Books.
- [35] Pang, J., Liang, D. and Wu, Y. (2023) The Effect of Widowhood on Depression of Caregivers. *BMC Health Service Research*, **23**, 722-736.
<https://doi.org/10.1186/s12913-023-09746-4>
- [36] Blanner Kristiansen, C., Kjær, J.N., Hjorth, P., Andersen, K. and Prina, A.M. (2019) Prevalence of Common Mental Disorders in Widowhood: A Systematic Review and Meta-Analysis. *Journal of Affective Disorders*, **245**, 1016-1023.
<https://doi.org/10.1016/j.jad.2018.11.088>